IN THE DRAWINGS:

The attached sheets of drawings include changes to FIGS. 2, 4 and 5. These sheets, which include FIGS. 2, 5 and 5 replace the original sheets including FIGS. 2, 4, and 5. FIG 2 has been amended to include the wording "PRIOR ART". FIG. 4 has been amended by substituting the reference number "28" for the reference number "50". FIG. 5 has been amended by insertion of the reference number "29." No new matter has been added.

REMARKS

The Office Action mailed 29 June 2005 has been received and considered. The application is presently amended to obviate the various concerns and objections raised by the Examiner. In view of these amendments and the following remarks, the applicant respectfully requests reconsideration of the application and the pending claims thereof.

OBJECTION UNDER 37 CFR 1.83(A):

The drawings of the instant application are objected to under 37 CFR 1.83(a). With reference to the Examiner's concerns regarding the depiction of the orifice in a direction tangential to the internal surface of the body of the mandrel, applicant respectfully submits that such an orifice is illustrated in Fig. 3 and is identified by the reference number "25." The direction of gas flow through the aforesaid orifice is illustrated by a directional arrow disposed at the exit of the orifice. The direction of the fluid flow in the mandrel is illustrated by another directional arrow in the lower portion of Fig. 3 near the reference indication "F F." Applicant respectfully submits that this illustration of the orifice meets the requirements of 37 CFR 1.83(a).

With reference to the language "distinct geometrical shapes", applicant has amended this language in claim 7. It is respectfully submitted that in view of the amendment to the referenced claim language, the drawings originally presented meet the requirements of 37 CFR 1.83(a).

With regard to the objection to the plurality of tangential injection orifices, applicant respectfully submits that these orifices are illustrated in amended Fig. 4 and are identified by the reference number "28" in that amended drawing Figure.

Concerning the superior longitudinal opening, applicant has cancelled claims 8-11 thereby rendering this objection moot.

Referring the Examiner's comments in paragraph 2 of the Action, applicant submits herewith an amended Figure 2 which incorporates the amendments requested by the Examiner.

With reference to the Examiner's comments in paragraph 3 of the Action, applicant has amended the drawing figures by substituting the reference number "28" for the reference number "50" thereby conforming the drawings to the specification. Similarly, paragraph [00125] has been amended to replace the reference number "26" with the reference number "28" to make this

reference consistent with the drawing figures. Likewise, the reference number "29" has been inserted into Fig. 5.

With reference to paragraph 4 of the Action, applicant submits herewith a certified copy of the Brazilian priority application as required by 35 USC 119(b). The Examiner is respectfully requested to enter this certified copy into the file of the instant application.

In view of the above considerations and the amendments referenced, applicant respectfully submits that the objections under 37 CFR 1.83(a) should now be withdrawn.

REJECTION UNDER 35 USC 102(B):

Claims 1 and 4 stand rejected under 35 USC 102(b) over Surles. Applicant has amended Claim 1 to distinguish over the teachings of the Surles reference. As amended claim 1 is now directed to a mandrel for use in a side pocket. As discussed in applicant's specification, conventional mandrels adapted for use in side pockets are configured to inject a gas flow either horizontally or downwardly into the fluid flowing through the production tubing. Claim 1 in contrast now requires at least one injection orifice configured for injecting gas upwards into the interior of the body of the mandrel for a gas lift valve. More specifically, Applicant's Claim 1 is directed to an arrangement wherein the injected gas is directioned along a flow path whereby upon its exit from an injection orifice the gas is traveling in an upward direction. By mandating this flow direction the momentum of the gas flow contributes to the momentum of the upward flow of the fluid through the production tubing as opposed to diminish that momentum. The criticality of this particular feature is set out in applicant's specification at paragraphs [0026] through [0030]. This criticality is further explained in paragraphs [00119]-[00125] wherein applicant also discusses the use of the injection orifice(s) to obtain the benefits of the "Coanda effect".

In contrast to the claimed construction the Surles disclosure does not teach nor suggest a configuration wherein the injection gas is introduced in an upwards direction into the fluid flow from the reservoir through the production tubing. Instead of an upwards flow, the injection gas in the Surles apparatus is introduced into the fluid flow in a direction orthogonal, i.e. perpendicular, to the direction of the fluid flow. See the orientation of the injection orifices (42)

in Fig. 1B of the Surles disclosure. In view of this distinction, applicant respectfully submits that Claim1, as amended, distinguishes over the Surles reference. Since Claim 4 depends from Claim 1, applicant maintains that it too should be allowable over the Surles reference in view of the same reasoning which supports the allowability of Claim 1 and further in view of the additional limitation set forth in Claim 4.

Claims 2 and 3 stand rejected under 35 USC 103(a) over Surles in view of Lamb. Applicant respectfully traverses the instant rejection. Claims 2 and 3 depend from Claim 1, as amended. Accordingly, each of these claims now requires an injection orifice adapted for injecting gas into the reservoir fluid flow in an upwards direction. As noted above, the Surles reference neither teaches nor suggestions the claimed injection orifice. Similarly the Lamb reference also teaches the use of an injection orifice (14) which is adapted for injecting gas into the flow channel of tubing (11) in a direction which is orthogonal or perpendicular to the flow of reservoir fluid through the tube 11. Lamb does not appear to contain any suggestion that this injection should occur in a direction which is upwards. In view of the absence of any teaching or suggestion in Lamb to direct the injected gas in an upward direction, applicant respectfully submits that neither Surles nor Lamb, either individually or combination, either teach or suggest the claimed injection orifice and the resultant directioning of the injection gas in an upwards direction. Applicant therefore requests that the instant rejection under 35 USC 103(a) be withdrawn.

Claims 8/2 and 8/3 stand rejected under 35 USC 103(a) over Surles in view of Lamb and further in view of Pringle. Claims 8/2 and 8/3 both depend indirectly from Claim 1, as amended. As a result both claims contain the limitation of an injection orifice adapted to direct an injection gas in an upwards direction. As noted above, neither Surles nor Lamb either teach or suggest such a limitation. As set out in Claim 1, amended, the injection orifice is configured in the lower body of the mandrel. The Pringle reference does not teach the disposition of such an injection orifice in the lower body of a mandrel. Instead, Pringle teaches an injection orifice in the lower body of a mandrel configured for injecting gas in the reservoir flow in a direction 180 degrees from the fluid flow from the reservoir, i.e. in a downward direction. In view of the absence of any teaching or suggestion in the Pringle reference to position an injection orifice in the lower body of a mandrel, applicant respectfully submits that Surles, Lamb and Pringle, either

individually or in combination neither teach nor suggest all of the limitations of Claims 8/2 and 8/3. Accordingly, applicant submits that the aforesaid claims are therefore allowable over these references.

Claims 5-7 are rejected under 35 USC 103(a) over Surles. Applicant respectfully traverses the rejection. Each of claims 5-7 depend either directly or indirectly from Claim 1, amended. As noted above, Claim 1 requires an injection orifice configured for injecting a gas upwards into the body of a mandrel. As further noted above, Surles neither teaches nor suggests such an orifice. In view of the absence of any teaching or suggestion in Surles of such an orifice, applicant respectfully submits that the instant claims distinguish over Surles and therefore the rejection should be withdrawn.

Claims 8/1, 8/4, 8/5, 8/6 and 9-11 are rejected under 35 USC 103(a) over Surles in view of Pringle. Claims 9-11 have been cancelled thereby rendering their rejection moot. With reference to claims 8/1, 8/4, 8/5 and 8/6 each of these claims depends from Claim 1 amended. As noted above, Claim 1 amended requires an injection orifice disposed in the lower body of the mandrel configured for injecting a gas upwards into the body of the mandrel. Neither Surles nor Pringle disclose such an injection orifice disposed within the lower body of a mandrel. It follows that neither Surles nor Pringle, either individually or in combination, either teach or suggest the claimed orifice construction. Accordingly, Claims 8/1, 8/4, 8/5 and 8/6 distinguish over Surles and Pringle and therefore the rejection should be withdrawn.

REJECTION UNDER 35 USC 112:

Claims 4-11 are rejected under 35 USC 112. Claims 8-11 have been cancelled thereby rendering their rejection moot. With reference to the issue of the reference number "28," applicant has amended Fig. 4 of the drawings by deleting the reference number "50" and substituting "28" therefore. It is respectfully submitted that with this amendment, any issue of indefiniteness associated with the indication of the reference number "28" in claims 4, 5, 6 and 7 has been obviated. Applicant has also amended claim 7 to remove the number "4" therefrom thereby addressing the Examiner's concern in this regard. The Examiner's concerns regarding

the reference number "29" have been rendered moot by the cancellation of claims 8-11. In view of the indicated amendments, the referenced claims should now be allowable under 35 USC 112.

CONCLUSION:

In view of the instant amendments to the claims, specification and drawings, applicant respectfully requests reconsideration of its application and the issuance of a notice of allowance.

Respectfully submitted,

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Date: December 29, 2005
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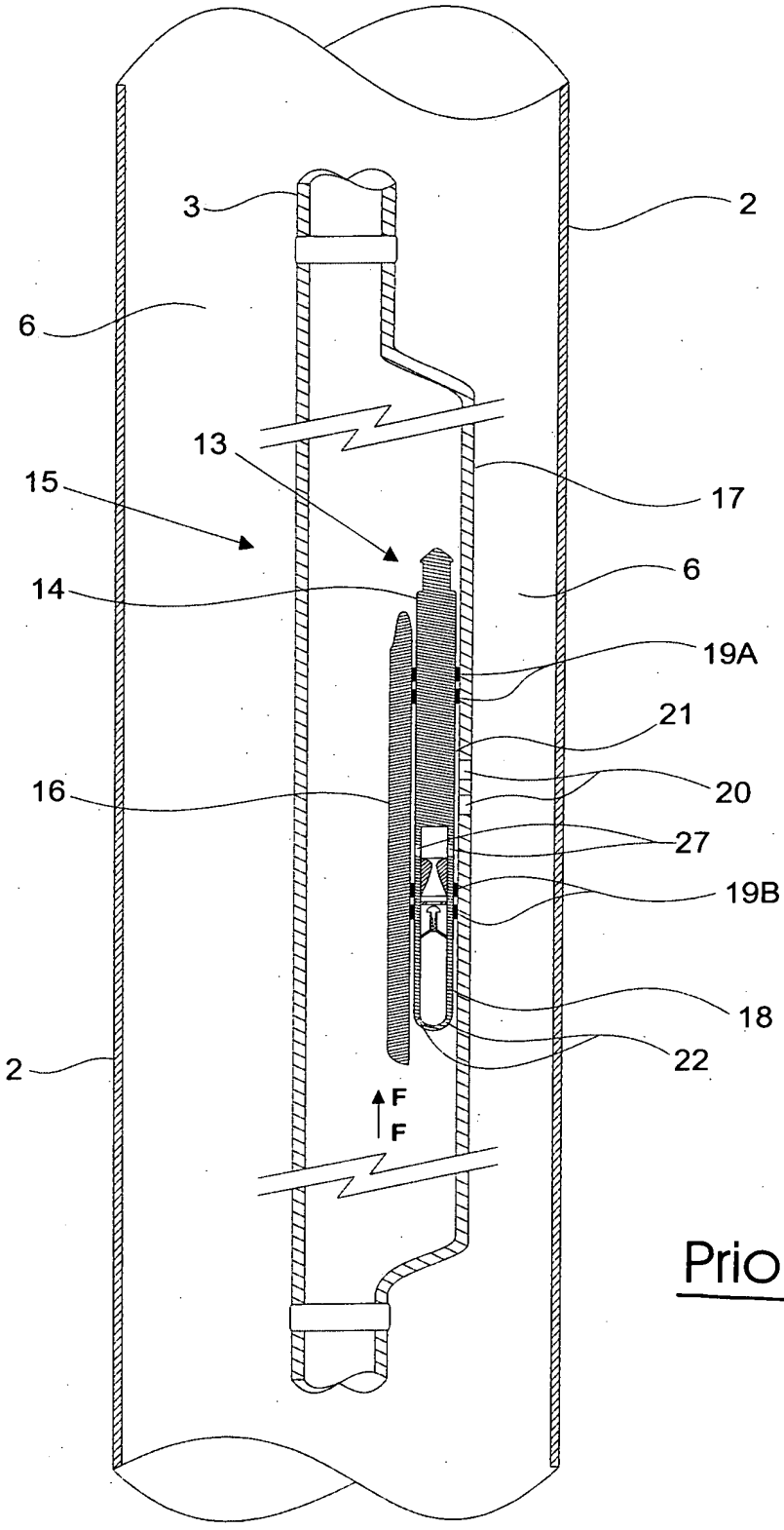

Prior Art

Fig. 2

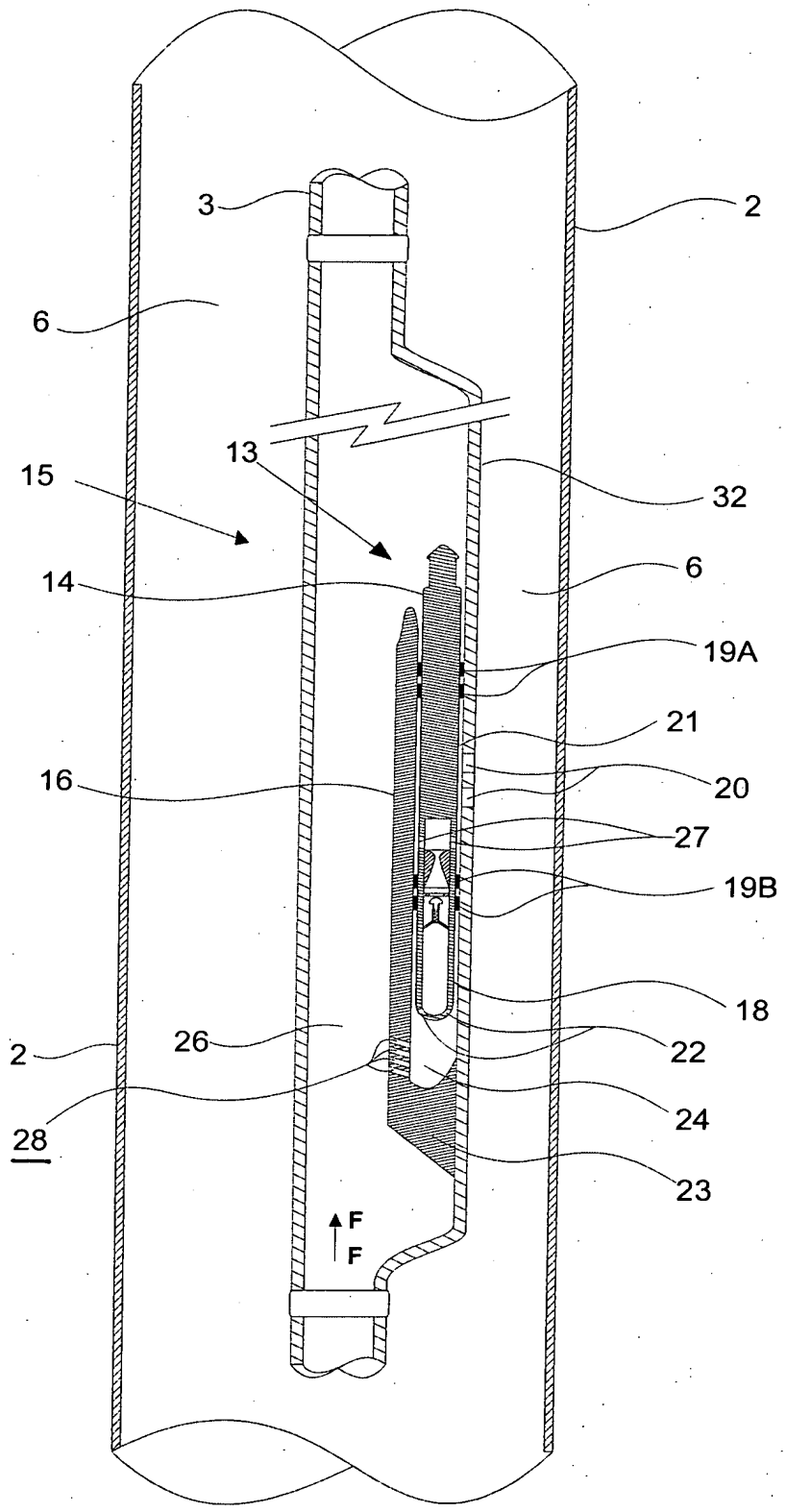

Fig. 4

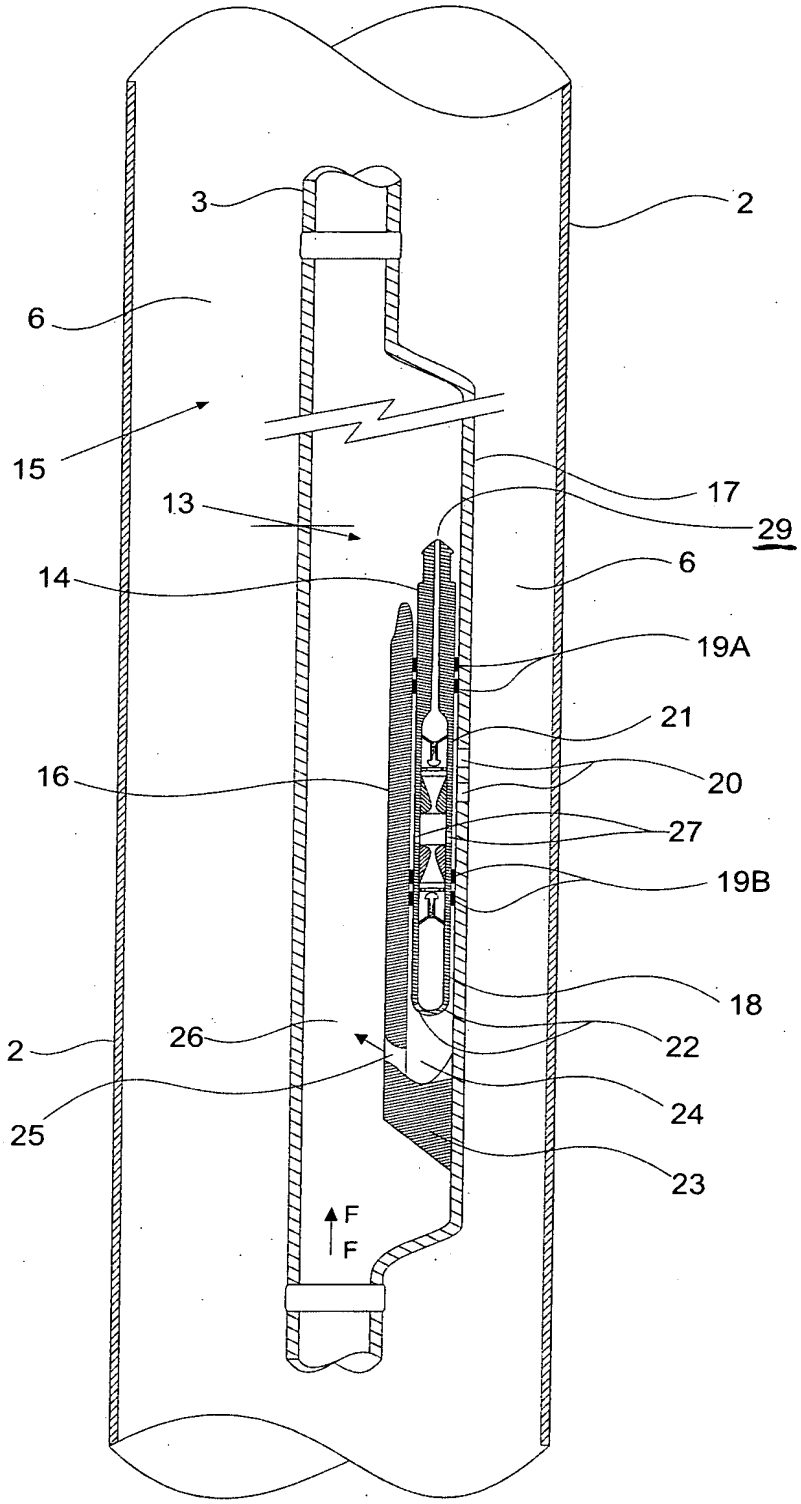

Fig. 5